



1

SEQUENCE LISTING

<110> BATTINI, JEAN-LUC GEORGES LAURENT
MANEL, NICOLAS GABRIEL ALBERT
KIM, FELIX JINHYUN
KINET, SANDRINA
TAYLOR, NAOMI
SITBON, MARC

<120> GLUT-1 AS A RECEPTOR FOR HTLV ENVELOPES AND ITS USES

<130> 0508-1149

<140> 10/555,289

<141> 2005-11-02

<150> PCT/EP2004/004624

<151> 2004-04-30

<150> EP 03291067.1

<151> 2003-05-02

<160> 32

<170> PatentIn Ver. 3.3

<210> 1

<211> 1479

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1476)

<400> 1

atg gag ccc agc agc aag aag ctg acg ggt cgc ctc atg ctg gct gtg	48
Met Glu Pro Ser Ser Lys Lys Leu Thr Gly Arg Leu Met Leu Ala Val	
1 5 10 15	
gga gga gca gtg ctt ggc tcc ctg cag ttt ggc tac aac act gga gtc	96
Gly Gly Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn Thr Gly Val	
20 25 30	
atc aat gcc ccc cag aag gtg atc gag gag ttc tac aac cag aca tgg	144
Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp	
35 40 45	
gtc cac cgc tat ggg gag agc atc ctg ccc acc acg ctc acc acg ctc	192
Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr Leu Thr Thr Leu	
50 55 60	
tgg tcc ctc tca gtg gcc atc ttt tct gtt ggg ggc atg att ggc tcc	240
Trp Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser	
65 70 75 80	

ttc tct gtg ggc ctt ttc gtt aac cgc ttt ggc cgg cgg aat tca atg	288
Phe Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met	
85 90 95	
ctg atg atg aac ctg ctg gcc ttc gtg tcc gcc gtg ctc atg ggc ttc	336
Leu Met Met Asn Leu Leu Ala Phe Val Ser Ala Val Leu Met Gly Phe	
100 105 110	
tcg aaa ctg ggc aag tcc ttt gag atg ctg atc ctg ggc cgc ttc atc	384
Ser Lys Leu Gly Lys Ser Phe Glu Met Leu Ile Leu Gly Arg Phe Ile	
115 120 125	
atc ggt gtg tac tgc ggc ctg acc aca ggc ttc gtg ccc atg tat gtg	432
Ile Gly Val Tyr Cys Gly Leu Thr Thr Gly Phe Val Pro Met Tyr Val	
130 135 140	
ggt gaa gtg tca ccc aca gcc ttt cgt ggg gcc ctg ggc acc ctg cac	480
Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His	
145 150 155 160	
cag ctg ggc atc gtc gtc ggc atc ctc atc gcc cag gtg ttc ggc ctg	528
Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu	
165 170 175	
gac tcc atc atg ggc aac aag gac ctg tgg ccc ctg ctg ctg agc atc	576
Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Ser Ile	
180 185 190	
atc ttc atc ccg gcc ctg ctg cag tgc atc gtg ctg ccc ttc tgc ccc	624
Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro	
195 200 205	
gag agt ccc cgc ttc ctg ctc atc aac cgc aac gag gag aac cgg gcc	672
Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala	
210 215 220	
aag agt gtg cta aag aag ctg cgc ggg aca gct gac gtg acc cat gac	720
Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp	
225 230 235 240	
ctg cag gag atg aag gaa gag agt cgg cag atg atg cgg gag aag aag	768
Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys	
245 250 255	
gtc acc atc ctg gag ctg ttc cgc tcc ccc gcc tac cgc cag ccc atc	816
Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile	
260 265 270	
ctc atc gct gtg gtg ctg cag ctg tcc cag cag ctg tct ggc atc aac	864
Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn	
275 280 285	
gct gtc ttc tat tac tcc acg agc atc ttc gag aag gcg ggg gtg cag	912
Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln	
290 295 300	

cag cct gtg tat gcc acc att ggc tcc ggt atc gtc aac acg gcc ttc	960
Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe	
305 310 315 320	
act gtc gtg tcg ctg ttt gtg gtg gag cga gca ggc cgg cgg acc ctg	1008
Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu	
325 330 335	
cac ctc ata ggc ctc gct ggc atg gcg ggt tgt gcc ata ctc atg acc	1056
His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr	
340 345 350	
atc gcg cta gca ctg ctg gag cag cta ccc tgg atg tcc tat ctg agc	1104
Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser	
355 360 365	
atc gtg gcc atc ttt ggc ttt gtg gcc ttc ttt gaa gtg ggt cct ggc	1152
Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly	
370 375 380	
ccc atc cca tgg ttc atc gtg gct gaa ctc ttc agc cag ggt cca cgt	1200
Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg	
385 390 395 400	
cca gct gcc att gcc gtt gca ggc ttc tcc aac tgg acc tca aat ttc	1248
Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe	
405 410 415	
att gtg ggc atg tgc ttc cag tat gtg gag caa ctg tgt ggt ccc tac	1296
Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr	
420 425 430	
gtc ttc atc atc ttc act gtg ctc ctg gtt ctg ttc ttc atc ttc acc	1344
Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr	
435 440 445	
tac ttc aaa gtt cct gag act aaa ggc cgg acc ttc gat gag atc gct	1392
Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala	
450 455 460	
tcc ggc ttc cgg cag ggg gga gcc agc caa agt gat aag aca ccc gag	1440
Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu	
465 470 475 480	
gag ctg ttc cat ccc ctg ggg gct gat tcc caa gtg tga	1479
Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val	
485 490	

<210> 2

<211> 492

<212> PRT

<213> Homo sapiens

<400> 2

Met Glu Pro Ser Ser Lys Lys Leu Thr Gly Arg Leu Met Leu Ala Val
1 5 10 15

Gly	Gly	Ala	Val	Leu	Gly	Ser	Leu	Gln	Phe	Gly	Tyr	Asn	Thr	Gly	Val	20	25	30
Ile	Asn	Ala	Pro	Gln	Lys	Val	Ile	Glu	Glu	Phe	Tyr	Asn	Gln	Thr	Trp	35	40	45
Val	His	Arg	Tyr	Gly	Glu	Ser	Ile	Leu	Pro	Thr	Thr	Leu	Thr	Thr	Leu	50	55	60
Trp	Ser	Leu	Ser	Val	Ala	Ile	Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	65	70	75
Phe	Ser	Val	Gly	Leu	Phe	Val	Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	85	90	95
Leu	Met	Met	Asn	Leu	Leu	Ala	Phe	Val	Ser	Ala	Val	Leu	Met	Gly	Phe	100	105	110
Ser	Lys	Leu	Gly	Lys	Ser	Phe	Glu	Met	Leu	Ile	Leu	Gly	Arg	Phe	Ile	115	120	125
Ile	Gly	Val	Tyr	Cys	Gly	Leu	Thr	Thr	Gly	Phe	Val	Pro	Met	Tyr	Val	130	135	140
Gly	Glu	Val	Ser	Pro	Thr	Ala	Phe	Arg	Gly	Ala	Leu	Gly	Thr	Leu	His	145	150	155
Gln	Leu	Gly	Ile	Val	Val	Gly	Ile	Leu	Ile	Ala	Gln	Val	Phe	Gly	Leu	165	170	175
Asp	Ser	Ile	Met	Gly	Asn	Lys	Asp	Leu	Trp	Pro	Leu	Leu	Leu	Ser	Ile	180	185	190
Ile	Phe	Ile	Pro	Ala	Leu	Leu	Gln	Cys	Ile	Val	Leu	Pro	Phe	Cys	Pro	195	200	205
Glu	Ser	Pro	Arg	Phe	Leu	Leu	Ile	Asn	Arg	Asn	Glu	Glu	Asn	Arg	Ala	210	215	220
Lys	Ser	Val	Leu	Lys	Lys	Leu	Arg	Gly	Thr	Ala	Asp	Val	Thr	His	Asp	225	230	235
Leu	Gln	Glu	Met	Lys	Glu	Glu	Ser	Arg	Gln	Met	Met	Arg	Glu	Lys	Lys	245	250	255
Val	Thr	Ile	Leu	Glu	Leu	Phe	Arg	Ser	Pro	Ala	Tyr	Arg	Gln	Pro	Ile	260	265	270
Leu	Ile	Ala	Val	Val	Leu	Gln	Leu	Ser	Gln	Gln	Leu	Ser	Gly	Ile	Asn	275	280	285
Ala	Val	Phe	Tyr	Tyr	Ser	Thr	Ser	Ile	Phe	Glu	Lys	Ala	Gly	Val	Gln	290	295	300
Gln	Pro	Val	Tyr	Ala	Thr	Ile	Gly	Ser	Gly	Ile	Val	Asn	Thr	Ala	Phe	305	310	315

Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu
 325 330 335
 His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr
 340 345 350
 Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser
 355 360 365
 Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly
 370 375 380
 Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg
 385 390 395 400
 Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe
 405 410 415
 Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr
 420 425 430
 Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr
 435 440 445
 Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala
 450 455 460
 Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu
 465 470 475 480
 Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val
 485 490

<210> 3
 <211> 924
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(924)

<400> 3
 atg ggt aag ttt ctc gcc act ttg att tta ttc ttc cag ttc tgc ccc 48
 Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
 1 5 10 15
 ctc atc ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga 96
 Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30
 gtc tcc tca tac cac tct aaa ccc tgc aat cct gcc cag cca gtt tgt 144
 Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

tcg tgg acc ctc gac ctg ctg gcc ctt tca gcg gat cag gcc cta cag	192
Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln	
50 55 60	
ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat	240
Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr	
65 70 75 80	
tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc	288
Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly	
85 90 95	
gga ggc tat tat tca gcc tct tat tca gac cct tgt tcc tta aag tgc	336
Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys	
100 105 110	
cca tac ctg ggg tgc caa tca tgg acc tgc ccc tat aca gga gcc gtc	384
Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val	
115 120 125	
tcc agc ccc tac tgg aag ttt cag caa gat gtc aat ttt act caa gaa	432
Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu	
130 135 140	
gtt tca cgc ctc aat att aat ctc cat ttt tca aaa tgc ggt ttt ccc	480
Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro	
145 150 155 160	
ttc tcc ctt cta gtc gac gct cca gga tat gac ccc atc tgg ttc ctt	528
Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu	
165 170 175	
aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc	576
Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro	
180 185 190	
cac tct aac cta gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctc ctg acc ctt gtc cag tta acc cta caa agc act aat tat act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc att gtc tgt atc gat cgt gcc agc cta tcc act tgg cac gtc cta	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt cca tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac cca tcg tta gcg ctt cca gcc ccc cac ctg acg tta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	

tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc 864
 Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro
 275 280 285

tgt cat aac tcc ctc atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc 912
 Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro
 290 295 300

acc cta gga tcc 924
 Thr Leu Gly Ser
 305

<210> 4

<211> 308

<212> PRT

<213> Human T-cell lymphotropic virus type 1

<400> 4

Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
 1 5 10 15

Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln
 50 55 60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr
 65 70 75 80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly
 85 90 95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys
 100 105 110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val
 115 120 125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu
 130 135 140

Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro
 145 150 155 160

Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu
 165 170 175

Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro
 180 185 190

His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser
 195 200 205

Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr
 210 215 220
 Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu
 225 230 235 240
 Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Thr Pro Leu Leu
 245 250 255
 Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn
 260 265 270
 Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro
 275 280 285
 Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro
 290 295 300
 Thr Leu Gly Ser
 305

<210> 5
 <211> 912
 <212> DNA
 <213> Human T-cell lymphotropic virus type 2

<220>
 <221> CDS
 <222> (1)..(912)

<400> 5
 atg ggt aac gtt ttc ttc cta ctt tta ttc agt ctc aca cac ttc cca 48
 Met Gly Asn Val Phe Phe Leu Leu Leu Phe Ser Leu Thr His Phe Pro
 1 5 10 15
 cca gtc cag cag agc cga tgc aca ctc acg gtt ggt att tcc tcc tac 96
 Pro Val Gln Gln Ser Arg Cys Thr Leu Thr Val Gly Ile Ser Ser Tyr
 20 25 30
 cac tcc agc ccc tgt agc cca acc caa ccc gtc tgc acg tgg aac ctc 144
 His Ser Ser Pro Cys Ser Pro Thr Gln Pro Val Cys Thr Trp Asn Leu
 35 40 45
 gac ctt aat tcc cta acg acg gac cag cga cta cat ccc ccc tgc cct 192
 Asp Leu Asn Ser Leu Thr Thr Asp Gln Arg Leu His Pro Pro Cys Pro
 50 55 60
 aac cta att act tac tct ggc ttc cac aaa act tat tcc tta tac tta 240
 Asn Leu Ile Thr Tyr Ser Gly Phe His Lys Thr Tyr Ser Leu Tyr Leu
 65 70 75 80
 ttc cca cat tgg ata aag aag cca aat aga cag ggc cta gga tac tac 288
 Phe Pro His Trp Ile Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr
 85 90 95

tcg ccc tcc tat aat gac cct tgc tcg cta caa tgc ccc tac tta ggc	336
Ser Pro Ser Tyr Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly	
100 105 110	
tgc caa tca tgg aca tgc cca tac acg ggc ccc gtc tcc agt cca tcc	384
Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Ser	
115 120 125	
tgg aag ttt cac tca gat gta aat ttc acc caa gaa gtc agc caa gtg	432
Trp Lys Phe His Ser Asp Val Asn Phe Thr Gln Glu Val Ser Gln Val	
130 135 140	
tcc ctt cga cta cac ttc tct aag tgc ggc tcc tcc atg acc ctt cta	480
Ser Leu Arg Leu His Phe Ser Lys Cys Gly Ser Ser Met Thr Leu Leu	
145 150 155 160	
gta gat gcc cct gga tat gat cct tta tgg ttc atc acc tca gaa ccc	528
Val Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Thr Ser Glu Pro	
165 170 175	
act cag cct ccc cca act cct ccc cca ctg gtc cat gac tcc gac ctt	576
Thr Gln Pro Pro Pro Thr Pro Pro Pro Leu Val His Asp Ser Asp Leu	
180 185 190	
gaa cac gtc cta acc ccc tcc acg tct tgg aca acc aaa atg ctc aag	624
Glu His Val Leu Thr Pro Ser Thr Ser Trp Thr Thr Lys Met Leu Lys	
195 200 205	
ttt atc cag ctg acc ttg cag agc acc aat tac tcc tgc atg gtt tgc	672
Phe Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys	
210 215 220	
gtg gat aga tcc agc ctc tca tcc tgg cat gtg ctc tac acc ccc aac	720
Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn	
225 230 235 240	
atc tcc att ccc caa caa acc tcc tcc cga acc atc ctc ttt cct tct	768
Ile Ser Ile Pro Gln Gln Thr Ser Ser Arg Thr Ile Leu Phe Pro Ser	
245 250 255	
ctt gcc ctg ccc gct cct cca ttc caa ccc ttc cct tgg acc cat tgc	816
Leu Ala Leu Pro Ala Pro Pro Phe Gln Pro Phe Pro Trp Thr His Cys	
260 265 270	
tac caa cct cgc cta cag gca ata acg aca gat gac tgc aac aac tcc	864
Tyr Gln Pro Arg Leu Gln Ala Ile Thr Thr Asp Asp Cys Asn Asn Ser	
275 280 285	
att atc ctc ccc cct ttt tcc ctc gcc ccc gta cct cct ccg gcg aca	912
Ile Ile Leu Pro Pro Phe Ser Leu Ala Pro Val Pro Pro Pro Ala Thr	
290 295 300	

<210> 6

<211> 304

<212> PRT

<213> Human T-cell lymphotropic virus type 2

<400> 6

Met	Gly	Asn	Val	Phe	Phe	Leu	Leu	Leu	Phe	Ser	Leu	Thr	His	Phe	Pro
1				5					10					15	
Pro	Val	Gln	Gln	Ser	Arg	Cys	Thr	Leu	Thr	Val	Gly	Ile	Ser	Ser	Tyr
		20						25					30		
His	Ser	Ser	Pro	Cys	Ser	Pro	Thr	Gln	Pro	Val	Cys	Thr	Trp	Asn	Leu
		35					40					45			
Asp	Leu	Asn	Ser	Leu	Thr	Thr	Asp	Gln	Arg	Leu	His	Pro	Pro	Cys	Pro
	50					55					60				
Asn	Leu	Ile	Thr	Tyr	Ser	Gly	Phe	His	Lys	Thr	Tyr	Ser	Leu	Tyr	Leu
65					70					75					80
Phe	Pro	His	Trp	Ile	Lys	Lys	Pro	Asn	Arg	Gln	Gly	Leu	Gly	Tyr	Tyr
			85						90					95	
Ser	Pro	Ser	Tyr	Asn	Asp	Pro	Cys	Ser	Leu	Gln	Cys	Pro	Tyr	Leu	Gly
			100					105					110		
Cys	Gln	Ser	Trp	Thr	Cys	Pro	Tyr	Thr	Gly	Pro	Val	Ser	Ser	Pro	Ser
		115					120					125			
Trp	Lys	Phe	His	Ser	Asp	Val	Asn	Phe	Thr	Gln	Glu	Val	Ser	Gln	Val
	130					135					140				
Ser	Leu	Arg	Leu	His	Phe	Ser	Lys	Cys	Gly	Ser	Ser	Met	Thr	Leu	Leu
145					150					155					160
Val	Asp	Ala	Pro	Gly	Tyr	Asp	Pro	Leu	Trp	Phe	Ile	Thr	Ser	Glu	Pro
				165					170					175	
Thr	Gln	Pro	Pro	Pro	Thr	Pro	Pro	Pro	Leu	Val	His	Asp	Ser	Asp	Leu
		180						185					190		
Glu	His	Val	Leu	Thr	Pro	Ser	Thr	Ser	Trp	Thr	Thr	Lys	Met	Leu	Lys
	195						200					205			
Phe	Ile	Gln	Leu	Thr	Leu	Gln	Ser	Thr	Asn	Tyr	Ser	Cys	Met	Val	Cys
	210					215					220				
Val	Asp	Arg	Ser	Ser	Leu	Ser	Ser	Trp	His	Val	Leu	Tyr	Thr	Pro	Asn
225					230					235					240
Ile	Ser	Ile	Pro	Gln	Gln	Thr	Ser	Ser	Arg	Thr	Ile	Leu	Phe	Pro	Ser
			245						250					255	
Leu	Ala	Leu	Pro	Ala	Pro	Pro	Phe	Gln	Pro	Phe	Pro	Trp	Thr	His	Cys
		260						265					270		
Tyr	Gln	Pro	Arg	Leu	Gln	Ala	Ile	Thr	Thr	Asp	Asp	Cys	Asn	Asn	Ser
	275					280						285			
Ile	Ile	Leu	Pro	Pro	Phe	Ser	Leu	Ala	Pro	Val	Pro	Pro	Pro	Ala	Thr
	290					295					300				

<210> 7
 <211> 1467
 <212> DNA
 <213> Simian T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(1465)

<400> 7
 atg ggt aag ttt ctc gcc act ttg att tta ttc ttc cag ttc tgc ccc 48
 Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
 1 5 10 15

ctc att ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga 96
 Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

gtc tcc tca tac ctc tct aaa ccc tgc aat cct gcc cag cca gtt tgt 144
 Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

tca tgg acc ctc gac cta ctg gcc ctt tca gca gac caa gcc cta cag 192
 Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln
 50 55 60

ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat 240
 Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr
 65 70 75 80

tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc 288
 Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly
 85 90 95

gga ggc tat tat tcg gcc tct tat tca gac cca tgt tct tta aag tgc 336
 Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys
 100 105 110

cca tac tta ggg tgc caa tca tgg acc tgc ccc tat aca gga gtc gtc 384
 Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val
 115 120 125

tcc agc ccc tat tgg aaa ttt cag caa gat gtc aat ttt act caa gaa 432
 Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu
 130 135 140

gtt tca cac ctc aat att aat ctc cat ttc tca aaa tgc ggt ttt ccc 480
 Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro
 145 150 155 160

ttc tcc ctt cta atc gac gct cca gga tat gac ccc atc tgg ttc ctt 528
 Phe Ser Leu Leu Ile Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu
 165 170 175

aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc 576
 Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro
 180 185 190

cac tct aac ctg gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctt ctg act ctt gtc cag cta acc cta caa agc act aat tac act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc atc gtc tgt ata gac cgt gcc agc ctc tct act tgg cat gtc ctg	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt ccg tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac ccg tcg tta gcg ctt cca gct ccc cac ctg acg cta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	
tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc	864
Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro	
275 280 285	
tgt cat aac tcc ctc atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc	912
Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro	
290 295 300	
acc cta gga tcc cgc tcc cgc cga gcg gta ccg gtg gcg gtc tgg ctt	960
Thr Leu Gly Ser Arg Ser Arg Arg Ala Val Pro Val Ala Val Trp Leu	
305 310 315 320	
gtc tcc gcc ctg gcc atg gga gcc gga att gct ggc ggg att acc ggc	1008
Val Ser Ala Leu Ala Met Gly Ala Gly Ile Ala Gly Gly Ile Thr Gly	
325 330 335	
tcc atg tcc ctc gcc tca gga aag agc ctc cta cat gag gtg gac aaa	1056
Ser Met Ser Leu Ala Ser Gly Lys Ser Leu Leu His Glu Val Asp Lys	
340 345 350	
gat att tcc caa tta act caa gca ata gtc aaa aac cac aaa aat cta	1104
Asp Ile Ser Gln Leu Thr Gln Ala Ile Val Lys Asn His Lys Asn Leu	
355 360 365	
ctc aaa att gca cag tat gct gcc cag aac agg cga ggc ctt gat ctc	1152
Leu Lys Ile Ala Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu	
370 375 380	
ctg ttc tgg gag caa gga gga tta tgc aaa gca tta caa gaa cag tgc	1200
Leu Phe Trp Glu Gln Gly Gly Leu Cys Lys Ala Leu Gln Glu Gln Cys	
385 390 395 400	
tgt ttt cta aat att acc aat tcc cat gtc tca ata cta caa gaa aga	1248
Cys Phe Leu Asn Ile Thr Asn Ser His Val Ser Ile Leu Gln Glu Arg	
405 410 415	

ccc ccc ctt gag aat cga gtc ctc act ggc tgg ggc ctt aac tgg gac 1296
 Pro Pro Leu Glu Asn Arg Val Leu Thr Gly Trp Gly Leu Asn Trp Asp
 420 425 430

ctt ggc ctc tca cag tgg gct cga gag gcc tta caa act ggg atc acc 1344
 Leu Gly Leu Ser Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr
 435 440 445

ctt gtt gca cta ctc ctt ctc gtt atc ctt gca gga cca tgc atc ctc 1392
 Leu Val Ala Leu Leu Leu Leu Val Ile Leu Ala Gly Pro Cys Ile Leu
 450 455 460

cgt cag ctg cga cac ctc ccc tcg cgc gtc aga tac ccc cat tat tct 1440
 Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser
 465 470 475 480

ctt ata aac cct gag tca tcc ctg taa 1467
 Leu Ile Asn Pro Glu Ser Ser Leu
 485

<210> 8

<211> 488

<212> PRT

<213> Simian T-cell lymphotropic virus type 1

<400> 8

Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
 1 5 10 15

Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln
 50 55 60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr
 65 70 75 80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly
 85 90 95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys
 100 105 110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val
 115 120 125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu
 130 135 140

Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro
 145 150 155 160

Phe	Ser	Leu	Leu	Ile	Asp	Ala	Pro	Gly	Tyr	Asp	Pro	Ile	Trp	Phe	Leu	
				165					170					175		
Asn	Thr	Glu	Pro	Ser	Gln	Leu	Pro	Pro	Thr	Ala	Pro	Pro	Leu	Leu	Pro	
			180					185					190			
His	Ser	Asn	Leu	Asp	His	Ile	Leu	Glu	Pro	Ser	Ile	Pro	Trp	Lys	Ser	
		195					200					205				
Lys	Leu	Leu	Thr	Leu	Val	Gln	Leu	Thr	Leu	Gln	Ser	Thr	Asn	Tyr	Thr	
	210					215					220					
Cys	Ile	Val	Cys	Ile	Asp	Arg	Ala	Ser	Leu	Ser	Thr	Trp	His	Val	Leu	
225					230					235					240	
Tyr	Ser	Pro	Asn	Val	Ser	Val	Pro	Ser	Ser	Ser	Ser	Thr	Pro	Leu	Leu	
			245					250						255		
Tyr	Pro	Ser	Leu	Ala	Leu	Pro	Ala	Pro	His	Leu	Thr	Leu	Pro	Phe	Asn	
			260					265					270			
Trp	Thr	His	Cys	Phe	Asp	Pro	Gln	Ile	Gln	Ala	Ile	Val	Ser	Ser	Pro	
		275					280					285				
Cys	His	Asn	Ser	Leu	Ile	Leu	Pro	Pro	Phe	Ser	Leu	Ser	Pro	Val	Pro	
	290					295					300					
Thr	Leu	Gly	Ser	Arg	Ser	Arg	Arg	Ala	Val	Pro	Val	Ala	Val	Trp	Leu	
305					310					315					320	
Val	Ser	Ala	Leu	Ala	Met	Gly	Ala	Gly	Ile	Ala	Gly	Gly	Ile	Thr	Gly	
				325					330					335		
Ser	Met	Ser	Leu	Ala	Ser	Gly	Lys	Ser	Leu	Leu	His	Glu	Val	Asp	Lys	
			340					345					350			
Asp	Ile	Ser	Gln	Leu	Thr	Gln	Ala	Ile	Val	Lys	Asn	His	Lys	Asn	Leu	
		355					360					365				
Leu	Lys	Ile	Ala	Gln	Tyr	Ala	Ala	Gln	Asn	Arg	Arg	Gly	Leu	Asp	Leu	
	370					375				380						
Leu	Phe	Trp	Glu	Gln	Gly	Gly	Leu	Cys	Lys	Ala	Leu	Gln	Glu	Gln	Cys	
385					390					395					400	
Cys	Phe	Leu	Asn	Ile	Thr	Asn	Ser	His	Val	Ser	Ile	Leu	Gln	Glu	Arg	
			405						410					415		
Pro	Pro	Leu	Glu	Asn	Arg	Val	Leu	Thr	Gly	Trp	Gly	Leu	Asn	Trp	Asp	
			420					425					430			
Leu	Gly	Leu	Ser	Gln	Trp	Ala	Arg	Glu	Ala	Leu	Gln	Thr	Gly	Ile	Thr	
		435				440						445				
Leu	Val	Ala	Leu	Leu	Leu	Leu	Val	Ile	Leu	Ala	Gly	Pro	Cys	Ile	Leu	
	450					455					460					

Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser
 465 470 475 480

Leu Ile Asn Pro Glu Ser Ser Leu
 485

<210> 9

<211> 1461

<212> DNA

<213> Simian T-cell lymphotropic virus type 2

<220>

<221> CDS

<222> (1)..(1461)

<400> 9

atg ggt aag ata att gct ttc ctt tta ttc cat ctt aca tgt atc aca	48
Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr	
1 5 10 15	
atc act aaa cag agc cgg tgc acg ctt acg gta ggt gtc tcc tcg tat	96
Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr	
20 25 30	
cac tct agt ccc tgc agt ctt gcc caa cct atc tgc acc tgg gat ctc	144
His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu	
35 40 45	
gac ctt cat tcc tta act aca gac caa cgt ctg tac cct cca tgc ccc	192
Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro	
50 55 60	
aat cta gtt tct tac tct aac ttc cac aag tcc tac tcc tta tat ttg	240
Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu	
65 70 75 80	
ttc ccg cac tgg gta aaa aag cca aat aga caa ggc ctg gga tac tat	288
Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr	
85 90 95	
tct gca tcc tac agc gac ccc tgc tcg ctc cag tgc cct tat tta gga	336
Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly	
100 105 110	
agc cag tct tgg aca tgc cct tac acc ggc ccc atc tcc agc ccg tct	384
Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser	
115 120 125	
tgg agg ttc cac cga gat gtt aac ttc acc caa gag gtc aac cat gta	432
Trp Arg Phe His Arg Asp Val Asn Phe Thr Gln Glu Val Asn His Val	
130 135 140	
acc ctc cgg cta cac ttc tcc cga tgt ggc tct tct atg acc ctc ctc	480
Thr Leu Arg Leu His Phe Ser Arg Cys Gly Ser Ser Met Thr Leu Leu	
145 150 155 160	

ata gac gcc cca ggc tac gac ccc ctg tgg ttc atc tct tcg gaa ccc	528
Ile Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Ser Ser Glu Pro	
165 170 175	
act cag ccc ccc ccc act tcc cca cca tta gtc cgc gac tct gac ctt	576
Thr Gln Pro Pro Pro Thr Ser Pro Pro Leu Val Arg Asp Ser Asp Leu	
180 185 190	
gaa cat atc tta acc ccc tcc tcc tcc tgg gct act agg atg cta acc	624
Glu His Ile Leu Thr Pro Ser Ser Ser Trp Ala Thr Arg Met Leu Thr	
195 200 205	
ctc atc caa cta act cta caa agt acc aat tat tct tgc atg gtt tgt	672
Leu Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys	
210 215 220	
ata gac aga acc agc ttg tgc tcc tgg cac gta ctc tat acc cct aat	720
Ile Asp Arg Thr Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn	
225 230 235 240	
atc tct gcc tca cct ggg ggc gac tcc ttg cct ata ctt tat ccc tcc	768
Ile Ser Ala Ser Pro Gly Gly Asp Ser Leu Pro Ile Leu Tyr Pro Ser	
245 250 255	
ttg gcc cta ccg gcc ccc caa ccc cag ccg ttt tcc tgg tct cac tgt	816
Leu Ala Leu Pro Ala Pro Gln Pro Gln Pro Phe Ser Trp Ser His Cys	
260 265 270	
tac cag ccc cac cta cag gca gta act aca gcc aat tgc aac aat tcc	864
Tyr Gln Pro His Leu Gln Ala Val Thr Thr Ala Asn Cys Asn Asn Ser	
275 280 285	
att gtc ctg ccc cca ttc tct ctc acc ccg gtg cct tcc cct ggg aca	912
Ile Val Leu Pro Pro Phe Ser Leu Thr Pro Val Pro Ser Pro Gly Thr	
290 295 300	
aga agc cgc cgg gct att cca gtg gct gta tgg ctc gtc tca gcc cta	960
Arg Ser Arg Arg Ala Ile Pro Val Ala Val Trp Leu Val Ser Ala Leu	
305 310 315 320	
gcg gcc ggg act ggt att gca ggg gga ata acc gga tcc ctg tcc cta	1008
Ala Ala Gly Thr Gly Ile Ala Gly Gly Ile Thr Gly Ser Leu Ser Leu	
325 330 335	
gca tca agc cgc agc ctg ctt ttt gaa gtt gac aaa gat att tcc cac	1056
Ala Ser Ser Arg Ser Leu Leu Phe Glu Val Asp Lys Asp Ile Ser His	
340 345 350	
ctc aca caa gcc atc gtt aaa aac cat caa aac atc ctc cgc gta gca	1104
Leu Thr Gln Ala Ile Val Lys Asn His Gln Asn Ile Leu Arg Val Ala	
355 360 365	
caa tat gca gcc caa aat aga aga gga cta gac ctc ctg ttt tgg gaa	1152
Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu Phe Trp Glu	
370 375 380	

caa gga ggc ctc tgc aaa gcc ata caa gag caa tgt tgc ttc ctt aac	1200
Gln Gly Gly Leu Cys Lys Ala Ile Gln Glu Gln Cys Cys Phe Leu Asn	
385 390 395 400	
atc agc aac acc cat gtg tcc gtc ctt cag gag cgc ccc ccc ctg gaa	1248
Ile Ser Asn Thr His Val Ser Val Leu Gln Glu Arg Pro Pro Leu Glu	
405 410 415	
aag aga gtc atc aca gga tgg ggt ctc aac tgg gac cta ggg cta tcc	1296
Lys Arg Val Ile Thr Gly Trp Gly Leu Asn Trp Asp Leu Gly Leu Ser	
420 425 430	
caa tgg gca cgg gaa gca ctc caa act ggt ata acc atc cta gcc ttg	1344
Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu	
435 440 445	
ctc ctc ctt gtc ata ctg ttc ggt cct tgt atc ctt cgc caa ctc caa	1392
Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln	
450 455 460	
tca ctt ccc cac cgg cta cag aac agg cac aac caa tac tct ctt att	1440
Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile	
465 470 475 480	
aac cag gaa acc aca cta taa	1461
Asn Gln Glu Thr Thr Leu	
485	

<210> 10

<211> 486

<212> PRT

<213> Simian T-cell lymphotropic virus type 2

<400> 10

Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr	
1 5 10 15	
Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr	
20 25 30	
His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu	
35 40 45	
Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro	
50 55 60	
Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu	
65 70 75 80	
Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr	
85 90 95	
Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly	
100 105 110	
Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser	
115 120 125	

Trp	Arg	Phe	His	Arg	Asp	Val	Asn	Phe	Thr	Gln	Glu	Val	Asn	His	Val
130						135					140				
Thr	Leu	Arg	Leu	His	Phe	Ser	Arg	Cys	Gly	Ser	Ser	Met	Thr	Leu	Leu
145					150					155					160
Ile	Asp	Ala	Pro	Gly	Tyr	Asp	Pro	Leu	Trp	Phe	Ile	Ser	Ser	Glu	Pro
				165					170					175	
Thr	Gln	Pro	Pro	Pro	Thr	Ser	Pro	Pro	Leu	Val	Arg	Asp	Ser	Asp	Leu
			180					185					190		
Glu	His	Ile	Leu	Thr	Pro	Ser	Ser	Ser	Trp	Ala	Thr	Arg	Met	Leu	Thr
		195					200					205			
Leu	Ile	Gln	Leu	Thr	Leu	Gln	Ser	Thr	Asn	Tyr	Ser	Cys	Met	Val	Cys
	210					215					220				
Ile	Asp	Arg	Thr	Ser	Leu	Ser	Ser	Trp	His	Val	Leu	Tyr	Thr	Pro	Asn
225					230					235					240
Ile	Ser	Ala	Ser	Pro	Gly	Gly	Asp	Ser	Leu	Pro	Ile	Leu	Tyr	Pro	Ser
				245					250					255	
Leu	Ala	Leu	Pro	Ala	Pro	Gln	Pro	Gln	Pro	Phe	Ser	Trp	Ser	His	Cys
			260					265					270		
Tyr	Gln	Pro	His	Leu	Gln	Ala	Val	Thr	Thr	Ala	Asn	Cys	Asn	Asn	Ser
		275					280					285			
Ile	Val	Leu	Pro	Pro	Phe	Ser	Leu	Thr	Pro	Val	Pro	Ser	Pro	Gly	Thr
	290					295					300				
Arg	Ser	Arg	Arg	Ala	Ile	Pro	Val	Ala	Val	Trp	Leu	Val	Ser	Ala	Leu
305					310					315					320
Ala	Ala	Gly	Thr	Gly	Ile	Ala	Gly	Gly	Ile	Thr	Gly	Ser	Leu	Ser	Leu
				325					330					335	
Ala	Ser	Ser	Arg	Ser	Leu	Leu	Phe	Glu	Val	Asp	Lys	Asp	Ile	Ser	His
			340					345					350		
Leu	Thr	Gln	Ala	Ile	Val	Lys	Asn	His	Gln	Asn	Ile	Leu	Arg	Val	Ala
		355					360					365			
Gln	Tyr	Ala	Ala	Gln	Asn	Arg	Arg	Gly	Leu	Asp	Leu	Leu	Phe	Trp	Glu
	370					375					380				
Gln	Gly	Gly	Leu	Cys	Lys	Ala	Ile	Gln	Glu	Gln	Cys	Cys	Phe	Leu	Asn
385					390					395					400
Ile	Ser	Asn	Thr	His	Val	Ser	Val	Leu	Gln	Glu	Arg	Pro	Pro	Leu	Glu
				405					410					415	
Lys	Arg	Val	Ile	Thr	Gly	Trp	Gly	Leu	Asn	Trp	Asp	Leu	Gly	Leu	Ser
			420					425					430		

Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu
 435 440 445

Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln
 450 455 460

Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile
 465 470 475 480

Asn Gln Glu Thr Thr Leu
 485

<210> 11
 <211> 930
 <212> DNA
 <213> Simian T-cell lymphotropic virus type 3

<220>
 <221> CDS
 <222> (1)..(930)

<400> 11

atg ggt aag ttt ggc ctt tat tgt ctt gtt cac ctt tac ata ctt ctc	48
Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu	
1 5 10 15	
cct gcc tcc tct ggc aat ccc agt cgg tgc acc ctg ttc ata ggg gcc	96
Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala	
20 25 30	
tct tcc tac cac tcc agc cct tgc ggg tcc agc ctc cca cgg tgt acc	144
Ser Ser Tyr His Ser Ser Pro Cys Gly Ser Ser Leu Pro Arg Cys Thr	
35 40 45	
tgg aat ctt gac cta ttc tcc ctc acg aaa gat caa agc cta agc ccc	192
Trp Asn Leu Asp Leu Phe Ser Leu Thr Lys Asp Gln Ser Leu Ser Pro	
50 55 60	
cca tgt cca gac tta att act tac tca caa tac cac aag ccc tac tcc	240
Pro Cys Pro Asp Leu Ile Thr Tyr Ser Gln Tyr His Lys Pro Tyr Ser	
65 70 75 80	
ctg tat gta ttc cct cat tgg ata act aaa cct aac cgc cgg ggc tta	288
Leu Tyr Val Phe Pro His Trp Ile Thr Lys Pro Asn Arg Arg Gly Leu	
85 90 95	
ggt tac tat tcc gct tcc tac tca gac ccc tgt gcc ata cag tgc cct	336
Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ala Ile Gln Cys Pro	
100 105 110	
tac ctg gga tgc cag tcg tgg aca tgc ccc tat acg ggc ccg gtg tcc	384
Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser	
115 120 125	
agt ccg cat tgg aga tac acc tat gat ctt aac ttt acc cag gag gta	432
Ser Pro His Trp Arg Tyr Thr Tyr Asp Leu Asn Phe Thr Gln Glu Val	
130 135 140	

tca tcc gtc tcc tta cac ttg cat ttc tcc aaa tgc gga tcc tcg ttc 480
 Ser Ser Val Ser Leu His Leu His Phe Ser Lys Cys Gly Ser Ser Phe
 145 150 155 160

tcc ttt cta cta gac gca cca gga tat gac cca gtg tgg ttc ctc tcc 528
 Ser Phe Leu Leu Asp Ala Pro Gly Tyr Asp Pro Val Trp Phe Leu Ser
 165 170 175

tcc cag gcc aca cag gct cca ccc aca cct gcc cct ctc ata cgg gac 576
 Ser Gln Ala Thr Gln Ala Pro Pro Thr Pro Ala Pro Leu Ile Arg Asp
 180 185 190

tca gat ctc cag tac att cta gaa ccg ccc att ccg tgg agc tct aag 624
 Ser Asp Leu Gln Tyr Ile Leu Glu Pro Pro Ile Pro Trp Ser Ser Lys
 195 200 205

att ctt aac ctt atc ctc ctc acc cta aaa agc act aac tat tct tgc 672
 Ile Leu Asn Leu Ile Leu Leu Thr Leu Lys Ser Thr Asn Tyr Ser Cys
 210 215 220

atg gtc tgt gtt gac cgc tcc agc cta tcc tca tgg cat gtc ctg tat 720
 Met Val Cys Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr
 225 230 235 240

gga ccc act caa gtc ccc agt cca ccc gac ccc caa gcc cgg tct atc 768
 Gly Pro Thr Gln Val Pro Ser Pro Pro Asp Pro Gln Ala Arg Ser Ile
 245 250 255

ctg cga cct gcc tta gct att ccc gcc agt aat atc acc ccc ccg ttt 816
 Leu Arg Pro Ala Leu Ala Ile Pro Ala Ser Asn Ile Thr Pro Pro Phe
 260 265 270

cct tgg acc cat tgc tat cgc cct cct ccg caa gcc atc tcc tcg gag 864
 Pro Trp Thr His Cys Tyr Arg Pro Pro Pro Gln Ala Ile Ser Ser Glu
 275 280 285

aat tgt aac aac tct gta gtg ctg ccc ccc ttt tct ctg tct cca att 912
 Asn Cys Asn Asn Ser Val Val Leu Pro Pro Phe Ser Leu Ser Pro Ile
 290 295 300

cct aac gtc tcc aga ccc 930
 Pro Asn Val Ser Arg Pro
 305 310

<210> 12

<211> 310

<212> PRT

<213> Simian T-cell lymphotropic virus type 3

<400> 12

Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu
 1 5 10 15

Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala
 20 25 30

[illegible]

<210> 13
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)

<400> 13
 att aaa aag cca aac cca aat ggc gga ggc tat tat tta gcc tct tat 48
 Ile Lys Lys Pro Asn Pro Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

 tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

 acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

 caa gat gtc 153
 Gln Asp Val
 50

<210> 14
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 14
 Ile Lys Lys Pro Asn Pro Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

 Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

 Gln Asp Val
 50

<210> 15
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)

<400> 15
 gtt aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
 Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

caa gat gtc 153
 Gln Asp Val
 50

<210> 16
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 16
 Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

Gln Asp Val
 50

<210> 17
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)

<400> 17
 att aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

```

acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt caa 144
Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
          35                      40                      45

```

```

caa gat gtc 153
Gln Asp Val
      50

```

```

<210> 18
<211> 51
<212> PRT
<213> Human T-cell lymphotropic virus type 1

```

```

<400> 18
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
  1          5          10          15

```

```

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
          20          25          30

```

```

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
          35                      40                      45

```

```

Gln Asp Val
      50

```

```

<210> 19
<211> 153
<212> DNA
<213> Human T-cell lymphotropic virus type 1

```

```

<220>
<221> CDS
<222> (1)..(153)

```

```

<400> 19
att aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
  1          5          10          15

```

```

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
          20          25          30

```

```

acc tgc ccc tat aca gga ccc gtc tcc agc ccc tac tgg aag ttt cag 144
Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln
          35                      40                      45

```

```

caa gat gtc 153
Gln Asp Val
      50

```


<210> 20
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 20
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30
 Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45
 Gln Asp Val
 50

<210> 21
 <211> 171
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(171)

<400> 21
 att aaa aag cca aac cga aat ggc gga ggc tat cat tca gcc tct tat 48
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr His Ser Ala Ser Tyr
 1 5 10 15
 tca gac cct tgt tcc tta aag tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30
 acc tgc ccc tat gca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Ala Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45
 caa gat gtc aat ttt acc cag gaa gta 171
 Gln Asp Val Asn Phe Thr Gln Glu Val
 50 55

<210> 22
 <211> 57
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 22
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr His Ser Ala Ser Tyr
 1 5 10 15
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

Thr Cys Pro Tyr Ala Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

Gln Asp Val Asn Phe Thr Gln Glu Val
 50 55

<210> 23
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 2

<220>
 <221> CDS
 <222> (1)..(153)

<400> 23
 ata aga aag cca aac aga cag ggc cta ggg tac tac tcg cct tcc tac 48
 Ile Arg Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr Ser Pro Ser Tyr
 1 5 10 15

 aat gac cct tgc tcg cta caa tgc ccc tac ttg ggc tcc caa tca tgg 96
 Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly Ser Gln Ser Trp
 20 25 30

 aca tgc cca tac acg gcc ccc gtc tcc act cca tcc tgg aat ttt cat 144
 Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His
 35 40 45

 tca gat gta 153
 Ser Asp Val
 50

<210> 24
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 2

<400> 24
 Ile Arg Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr Ser Pro Ser Tyr
 1 5 10 15

 Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly Ser Gln Ser Trp
 20 25 30

 Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His
 35 40 45

 Ser Asp Val
 50

<210> 25
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 25

Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr
 1 5 10

<210> 26

<211> 22

<212> PRT

<213> Homo sapiens

<400> 26

Asn Gln Thr Trp Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr
 1 5 10 15

Leu Thr Thr Leu Trp Ser
 20

<210> 27

<211> 10

<212> PRT

<213> Homo sapiens

<400> 27

Lys Ser Phe Glu Met Leu Ile Leu Gly Arg
 1 5 10

<210> 28

<211> 9

<212> PRT

<213> Homo sapiens

<400> 28

Asp Ser Ile Met Gly Asn Lys Asp Leu
 1 5

<210> 29

<211> 14

<212> PRT

<213> Homo sapiens

<400> 29

Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln Gln Pro
 1 5 10

<210> 30

<211> 10

<212> PRT

<213> Homo sapiens

<400> 30

Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser
 1 5 10

<210> 31
<211> 7
<212> PRT
<213> Homo sapiens

<400> 31
Gln Tyr Val Glu Gln Leu Cys
1 5

<210> 32
<211> 13
<212> PRT
<213> Homo sapiens

<400> 32
Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys
1 5 10